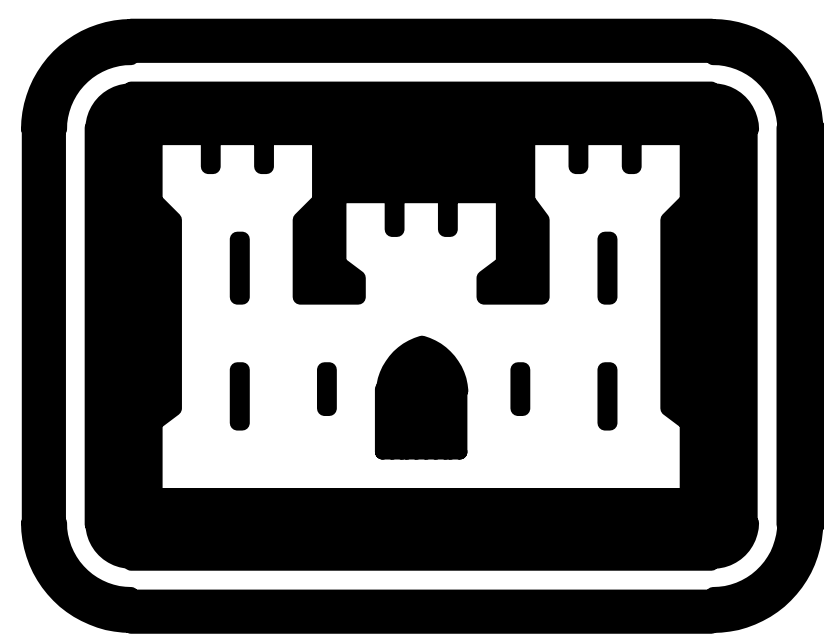


# UTILITY LOCATION AND REMOVAL PROJECT

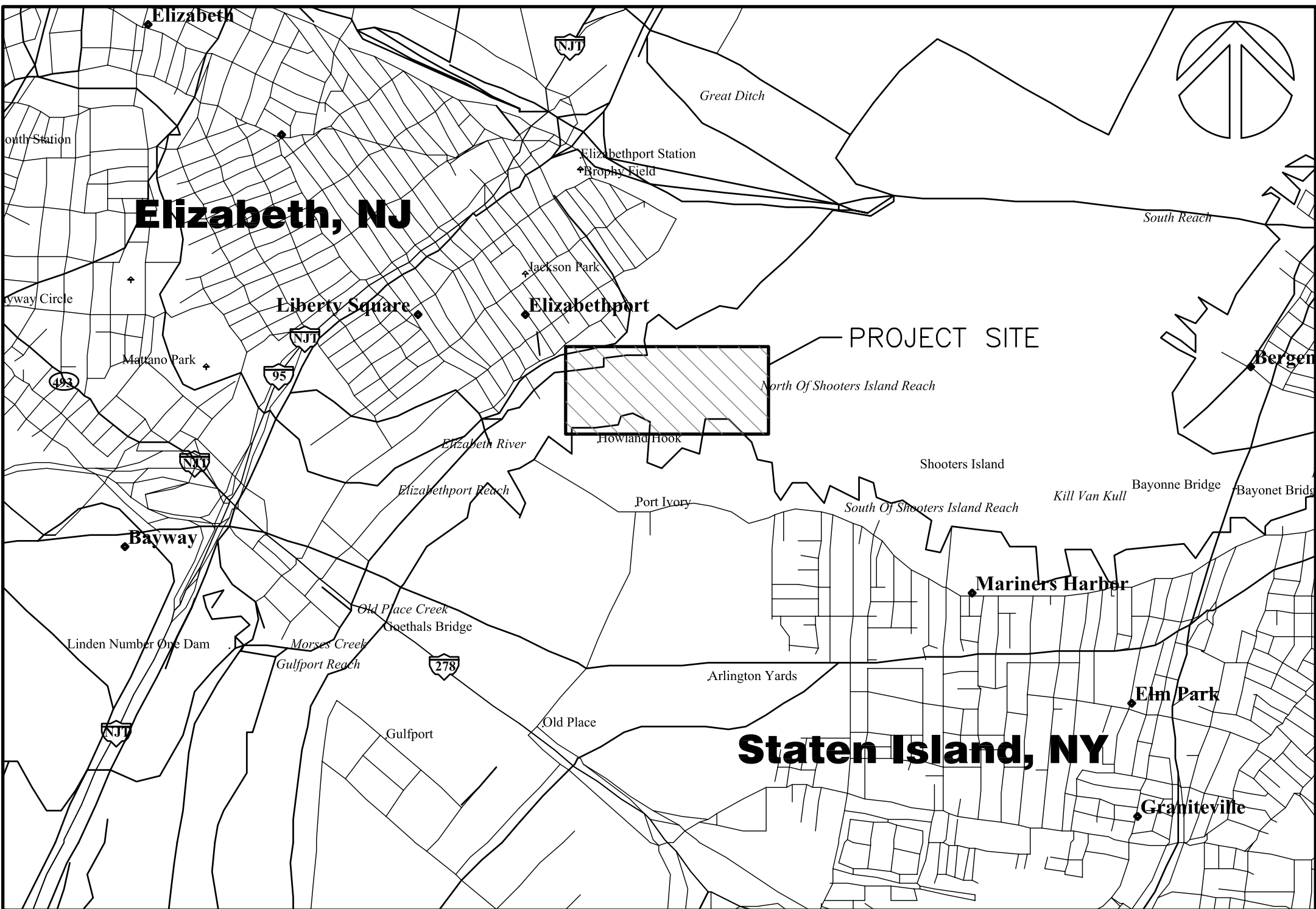
## ARTHUR KILL WATERWAY AK-2 AND AK-3

### PROJECT AREAS

W912DS-05-B-0014

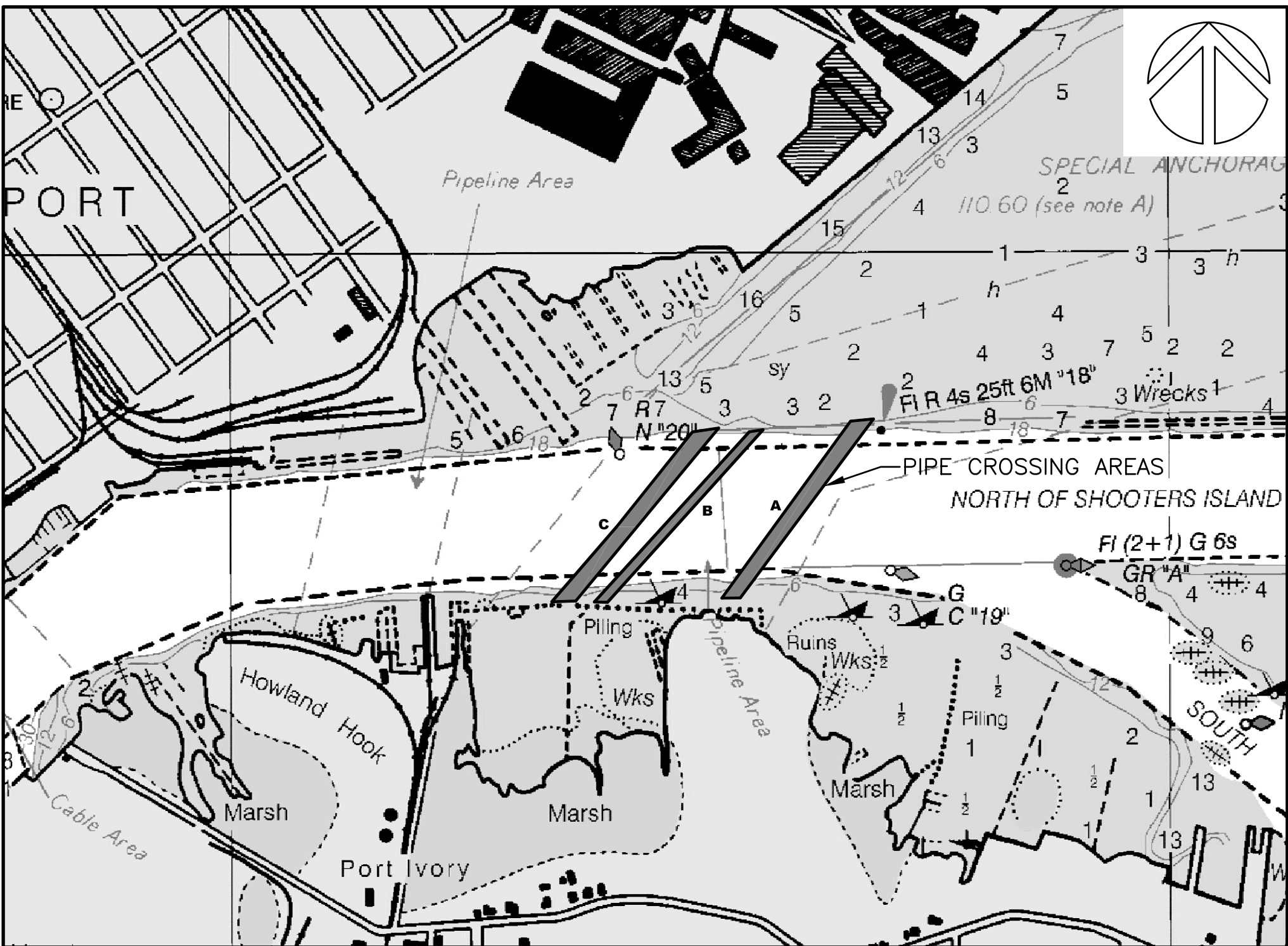


U.S. ARMY ENGINEER DIVISION  
CORPS OF ENGINEERS  
NEW YORK DISTRICT

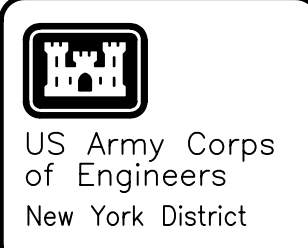


REGIONAL MAP  
SCALE: 1"=2000'-0"

Sheet Ref. No.	Title
C-001	COVER SHEET AND DRAWING LIST
C-102	GENERAL PROJECT PLAN
C-403	UTILITY LOCATION PLAN "A" AND CROSS-SECTION
C-404	UTILITY LOCATION PLAN "A" WITH GEOPHYSICAL DATA
C-405	UTILITY LOCATION PLAN "B" AND CROSS-SECTION
C-406	UTILITY LOCATION PLAN "B" WITH GEOPHYSICAL DATA
C-407	UTILITY DEBRIS LOCATION PLAN "C" AND CROSS-SECTION
C-408	UTILITY DEBRIS LOCATION PLAN "C" WITH GEOPHYSICAL DATA



VICINITY MAP  
SCALE: 1"=600'-0"



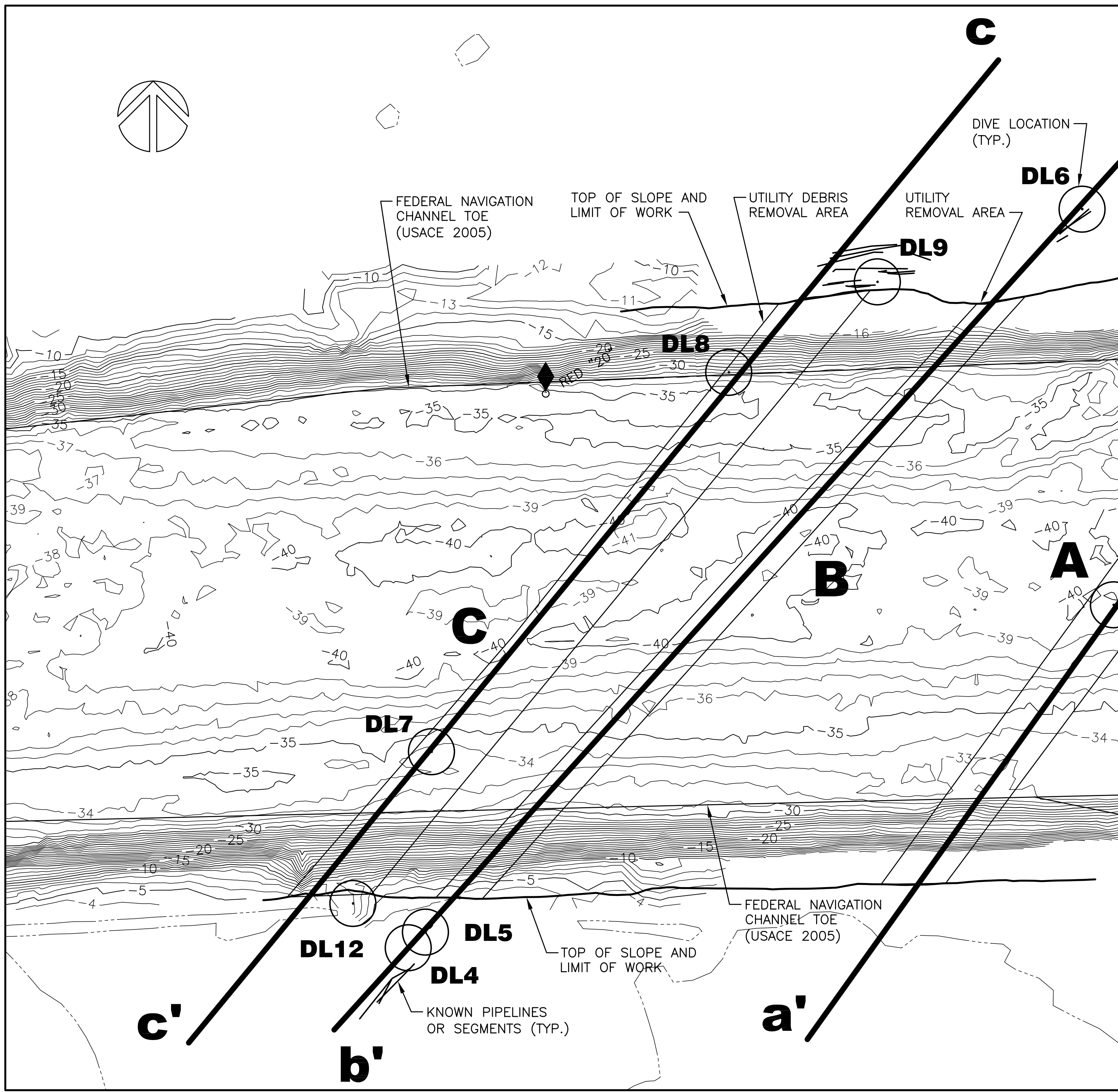
Rev.	Date	Design	Drawn	Checked	Reviewed	Submitted	Approved	Description
0	5/22/05	W912DS-05-B-0014	W912DS-05-B-0014	W912DS-05-B-0014	W912DS-05-B-0014	W912DS-05-B-0014	W912DS-05-B-0014	W912DS-05-B-0014

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS NEW YORK DISTRICT	DESIGNED BY: W912DS-05-B-0014 DRAWN BY: W912DS-05-B-0014 CHECKED BY: W912DS-05-B-0014 REVIEWED BY: W912DS-05-B-0014 SUBMITTED BY: W912DS-05-B-0014 APPROVED BY: W912DS-05-B-0014
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UTILITY LOCATION AND REMOVAL PROJECT  
ARTHUR KILL WATERWAY AK-2 AND AK-3  
PROJECT AREAS

COVER SHEET AND DRAWING LIST

Sheet  
reference  
number:  
C-001  
Sheet 1 of 8



UTILITY DEBRIS LOCATION PLAN "C"

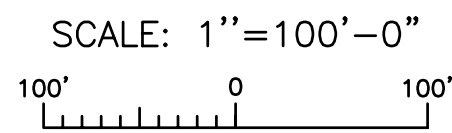
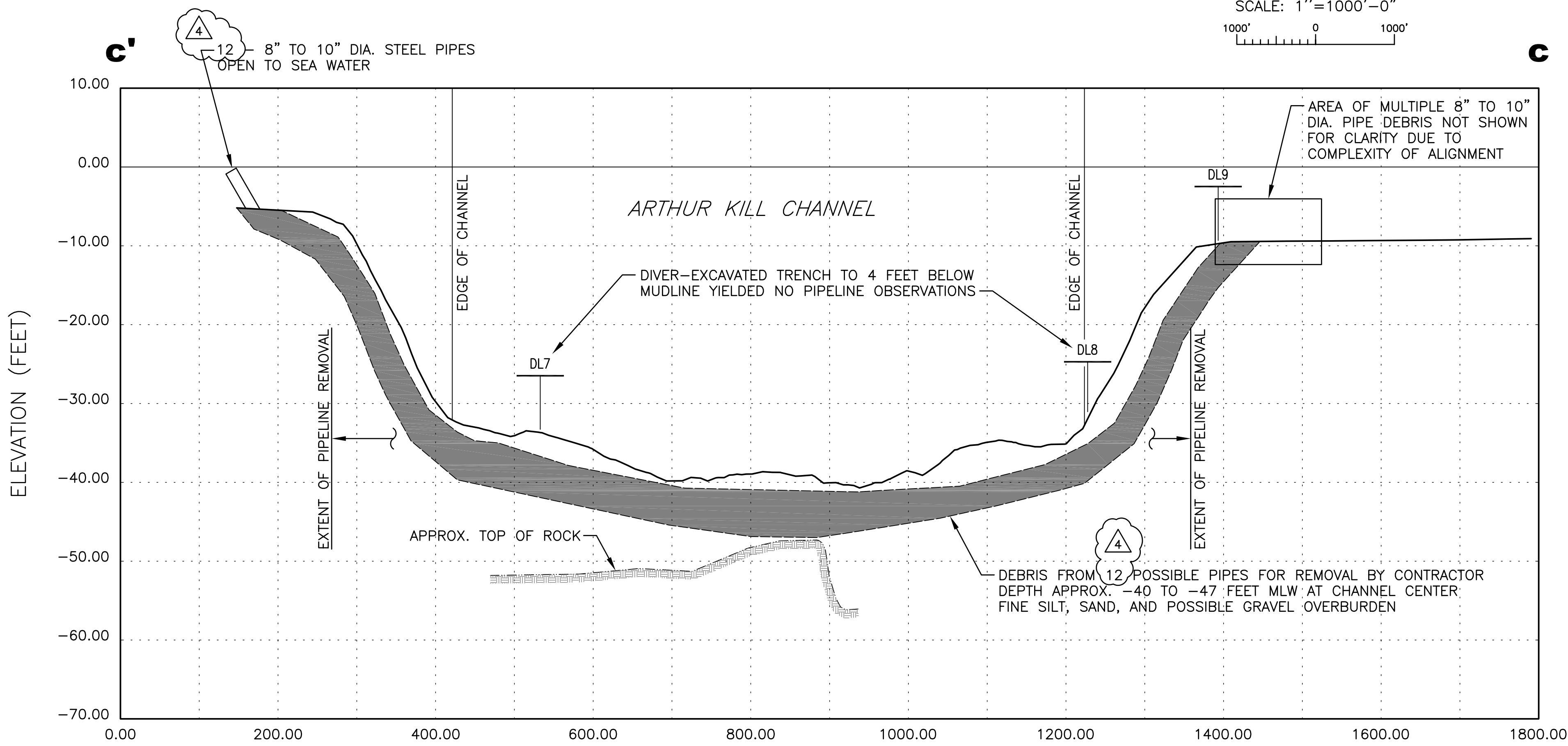


TABLE 1 PIPELINE INFORMATION								
PIPELINE	ASSUMED ORIGIN	REFERENCE DRAWING/DOCUMENTS	PIPELINE TYPE (PIPELINE DIAMETERS ARE SHOWN AS NOMINAL)	FIELD OBSERVATIONS OF NOTE	CAPPED/OPEN/INTACT	PRODUCT PRESENT?	APPROXIMATE LENGTH OF PIPE FOR REMOVAL	APPROX. BARE PIPE WEIGHT (TONS)
(12)	ESSO/STANDARD	COASTAL PIPELINE CO LOCATION PLAN AND HISTORICAL DATA.CAL	STEEL; 8" TO 10" DIAMETER; NO FURTHER INFORMATION	PIPELINE BUNDLE OF 12 LINES OBSERVED ON SOUTH SLOPE OF AK; SOME PIPELINES, WITH EAST-WEST TREND, ON NORTH SLOPE	CUT/OPEN	UNLIKELY	1475'	443

TABLE 2 LOCATIONS OF KNOWN PIPE DEBRIS TO BE REMOVED			
DIVE LOCATION	PIPELINE	LOCATION	COORDINATES
DL9	1	ENTERING MUDLINE	N 661032/E 582386
DL9	2	ENTERING MUDLINE	N 661026/E 582412
DL9	3	ENTERING MUDLINE	N 661024/E 582424
DL9	4	ENTERING MUDLINE	N 661051/E 582450
DL9	5	ENTERING MUDLINE	N 661035/E 582325
DL9	6	ENTERING MUDLINE	N 661045/E 582343
DL9	7	ENTERING MUDLINE	N 661053/E 582347
DL9	8	ENTERING MUDLINE	N 661009/E 582340
DL9	9	ENTERING MUDLINE	N 661007/E 582333
DL9	10	ENTERING MUDLINE	N 661006/E 582366
DL9	11	ENTERING MUDLINE	N 661027/E 582347
DL12	MULTIPLE (12)	20' ABOVE MUDLINE	N 660134/E 581669

TABLE 3 UTILITY DEBRIS REMOVAL AREA "C" BOUNDARY	
NORTHING	EASTING
661022	582303
661023	582419
660087	581645
660081	581522



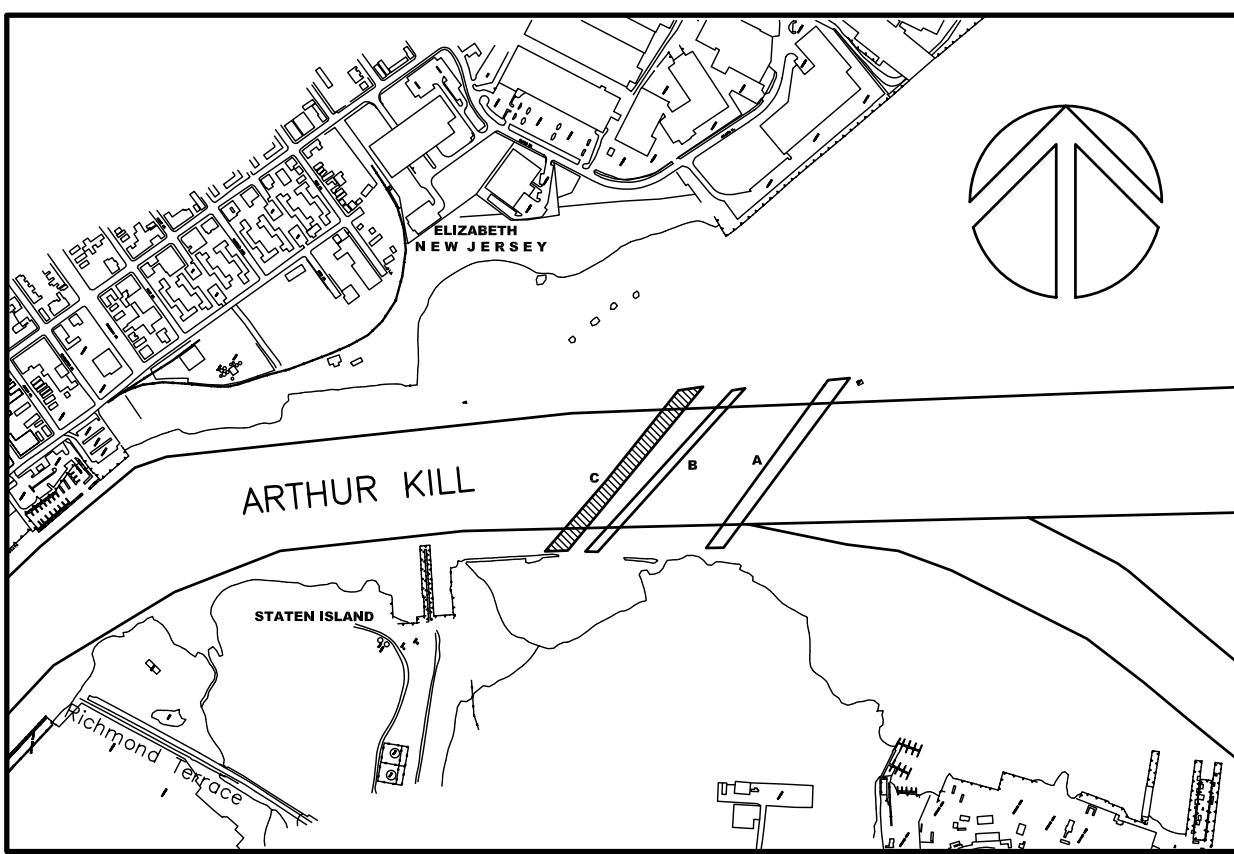
SECTION c'-c

HORIZ. SCALE: 1"=100'-0"

VERT. SCALE: 1"=10'-0"

NOTES

- HORIZONTAL DATUM IS BASED ON THE NEW JERSEY STATE PLANE FEET - NORTH AMERICAN DATUM OF 1983 (NAD 83).
- ALL CONTOURS ARE IN FEET RELATIVE TO U.S. ARMY CORPS OF ENGINEERS MEAN LOW WATER DATUM, WHICH IS 2.33 FEET BELOW NGVD 29.
- BATHYMETRIC CONTOURS DEVELOPED FROM U.S. ARMY CORPS OF ENGINEERS HYDROGRAPHIC SURVEY DRAWING FILE No. 1245A, DATED JUNE 19, 2003. AND CAN ONLY REFLECT BOTTOM CONDITIONS AT TIME OF SURVEY.
- DIVE LOCATIONS NUMBERED DL1 THROUGH DL12 REPRESENT LOCATIONS OF UNDERWATER INVESTIGATION PERFORMED BY A U.S. ARMY CORPS OF ENGINEERS CONTRACTOR IN AUGUST AND SEPTEMBER 2004.
- UTILITY REMOVAL AREAS "A" AND "B" REPRESENT GROUPING OF PIPELINES THAT ARE SIMILAR IN LOCATION, ORIENTATION, AND/OR CONSTRUCTION, AND ARE TO BE REMOVED UNDER THIS CONTRACT.
- UTILITY DEBRIS REMOVAL AREA "C" REPRESENTS A GROUPING OF PIPE DEBRIS THAT IS IN A SIMILAR LOCATION, ORIENTATION, AND/OR CONSTRUCTION, AND IS TO BE REMOVED.
- INTERPRETATIONS OF CROSS-SECTIONS a'-a, b'-b, AND c'-c HAVE BEEN DERIVED FROM HYDROGRAPHIC SURVEY DATA, SIDESCAN SONAR IMAGERY, MARINE MAGNETOMETER DATA, SHALLOW SEISMIC REFLECTION DATA, DIVER OBSERVATIONS, AND HISTORICAL DOCUMENTATION.
- SECTIONS a'-a, b'-b, AND c'-c SHOULD BE ASSUMED BY THE CONTRACTOR TO BE APPROXIMATE PROJECTIONS THAT ARE REPRESENTATIVE OF THE GENERAL CONDITIONS OF THE EXTENTS DEFINED BY AREAS A, B, AND C. MULTIPLE PIPELINES IN EACH CROSSING AREA ARE LIKELY TO OCCUR AT DIFFERENT ELEVATIONS AND X-Y LOCATIONS WITHIN EACH CROSSING AREA AS INDICATED IN SECTIONS a'-a, b'-b, AND c'-c.
- THE MAGNETOMETER PLAN ON DRAWING C-408 IS A CONTOUR MAP OF DATA COLLECTED JULY 2004 BY A U.S. ARMY CORPS OF ENGINEERS CONTRACTOR. DENSELY SPACED CONTOUR LINES REPRESENT DISTORTIONS IN THE LOCAL MAGNETIC FIELD THAT ARE CAUSED BY FERROUS OBJECTS SUCH AS STEEL OR WROUGHT IRON PIPELINES.
- THE SIDESCAN SONAR IMAGE PLAN ON DRAWING C-408 IS A MOSAIC OF SIDESCAN SONAR IMAGERY COLLECTED APRIL-JUNE 2004 BY A U.S. ARMY CORPS OF ENGINEERS CONTRACTOR. THE IMAGERY IS PRESENTED AS ILLUMINATED FROM THE SOUTH SO THAT AREAS OF HIGH REFLECTIVITY ARE BRIGHT AND AREAS OF LOW REFLECTIVITY ARE DARK.
- LOCATIONS OF KNOWN PIPELINES TO BE REMOVED HAVE BEEN ASCERTAINED BY DIVERS UTILIZING PLUMB LINES AND DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS).
- PIPELINES OBSERVED BY DIVERS AND LISTED IN TABLE 1 HAVE BEEN ASSOCIATED WITH KNOWN HISTORIC PIPELINES BASED ON INTERPRETATIONS THAT DRAW UPON APPROXIMATE LOCATION, SIZE, AND CONDITION ON THE LINES.
- PREDICTIONS AS TO THE HISTORY OR CONTAINED PRODUCT ARE ONLY ESTIMATES. THE CONTRACTOR MUST EXERCISE CAUTION WHEN HANDLING ANY LINE FOR REMOVAL IN ORDER TO PREVENT SPILLS AND/OR DAMAGE TO IN-SERVICE UTILITIES OR STRUCTURES.



KEY PLAN

SCALE: 1"=1000'-0"

Rev.	Date	Design	Drawn	Checked	Reviewed	Submitted	Approved	Description
0	1/11/04	J.S.W.	R.B.	R.B.	J.S.W.	J.S.W.	J.S.W.	REVISED NUMBER OF PIPELINES IN SECTION C-C.

Designed by: J.S.W.	Drawn by: R.B.	Checked by: R.B.	Reviewed by: J.S.W.	Submitted by: J.S.W.	Approved by: J.S.W.
U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS NEW YORK DISTRICT					
U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS NEW YORK DISTRICT					

UTILITY LOCATION AND REMOVAL PROJECT ARTHUR KILL WATERWAY AK-2 AND AK-3	UTILITY DEBRIS LOCATION PLAN "C" AND CROSS-SECTION
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